

## **Conference/Workshop Abstract Approval**

Submitted on 8/19/16

### **Conference/Workshop:**

Technology Collaboration Center (TCC) of Houston: Radiation Technologies Event

### **Conference/Workshop Place and Time:**

Place: Gilruth Center, JSC

Time: Sept 21, 2016

### **Author:**

Martin Leitgab, on behalf of the CPAD Team

### **Title:**

NASA Crew Personal Active Dosimeters (CPADs): Leveraging Novel Terrestrial Personal Radiation Monitoring Capabilities for Space Exploration

### **Abstract:**

The NASA Space Radiation Analysis Group (SRAG) is developing novel Crew Personal Active Dosimeters (CPADs) for upcoming crewed space exploration missions and beyond. To reduce the resource footprint of the project a COTS dosimeter base is used for the development of CPADs. This base was identified from evaluations of existing COTS personal dosimeters against the concept of operations of future crewed missions and tests against detection requirements for radiation characteristic of the space environment. CPADs exploit operations efficiencies from novel features for space flight personal dosimeters such as real-time dose feedback, and autonomous measuring and data transmission capabilities. Preliminary CPAD design, results of radiation testing and aspects of operational integration will be presented.